

WHAT IS CLAIMED IS:

1. A resonator comprising:
an electrode, in part of which an opening is defined, said electrode
5 being formed on a dielectric substrate; and
a plurality of electrode patterns extended inwards from a periphery of
said opening so that a plurality of slot lines are arranged substantially radially.
- 10 2. A filter comprising a resonator as set forth in Claim 1, further
comprising a signal input/output unit coupled to said resonator.
- 15 3. An oscillator comprising a resonator as set forth in Claim 1, and
further comprising a reflex amplification circuit coupled to said resonator.
4. A communication apparatus comprising a high-frequency circuit, said
circuit comprising a resonator as set forth in Claim 1.
- 20 5. A communication apparatus comprising a high-frequency circuit, said
circuit comprising a filter as set forth in Claim 2.
6. A communication apparatus comprising a high-frequency circuit, said
circuit including an oscillator as set forth in Claim 3.

7. A duplexer comprising:

a transmission filter and a reception filter connected respectively between a transmission signal input port and an input/output port used in common for transmission and reception, and between the input/output port and a reception signal output port;

each said filter comprising a resonator having an electrode, in part of which an opening is defined, said electrode being formed on a dielectric substrate;

a plurality of electrode patterns extended inwards from a periphery of said opening so that a plurality of slot lines are arranged substantially radially; and

10 a signal input/output unit coupled to said resonator.

8. A communication apparatus comprising a high-frequency circuit, said circuit including a duplexer as set forth in Claim 7.